

What is claimed is:

1. A permanent-magnet type electric rotating machine comprising:

a rotation axis;

a rotor that rotates together with said rotation axis, said rotor having a closed-end-cup-shaped holder that is mounted at one end of said rotation axis and a permanent magnet fixed on an inner surface of a cylindrical portion of said holder; and

a stator that rotatably supports said rotation axis, said stator having a housing bush that supports said rotation axis in an axis hole formed through the center thereof, stator cores that are radially mounted around said housing bush to face the outer tip ends thereof to said permanent magnet with an air gap and coils that are wound around said stator cores via insulators,

wherein inner base portions of said stator cores are connected to one another with pressure so as to form a ring-shaped yoke by mounting said stator cores around said housing bush.

2. The permanent-magnet type electric rotating machine according to claim 1, wherein a reentrant extending in the axial direction is formed on the inner surface of each of said stator cores and external protrusions are formed around said housing

bush,

wherein said stator cores are fixed to said housing bush by fitting said external protrusions to said reentrants and caulking the external protrusions to cause plastic deformation.

3. The permanent-magnet type electric rotating machine according to claim 1 or 2, further comprising a circuit board that carries drive circuit for the electric rotating machine, said circuit board having a mounting hole formed thereon,

wherein flat portions are formed along the inner edge of said mounting hole of said circuit board and outer surface of a circuit-board-mounting portion of said housing bush so that said circuit board is positioned and fixed to the housing bush by engaging said flat portions with each other.

4. The permanent-magnet type electric rotating machine according to one of claims 1 through 3, further comprising a bracket that acts as a mounting member of the electric rotating machine to fix the machine to an outside, said bracket having a mounting hole formed thereon,

wherein nicks are formed along the inner edge of said mounting hole of said bracket, said nicks are outwardly extended from the inner edge, and

wherein said bracket is fixed to said housing bush by engaging the bracket to the housing bush and caulking a

bracket-mounting portion of said housing bush to cause plastic deformation so that the deformed bracket-mounting portion gets into said nicks.

5. The permanent-magnet type electric rotating machine according to one of claims 1 through 4, wherein said housing bush is formed by die-casting of zinc or aluminum, or sintering molding of sintering material so that manufacturing after die-casting or molding is unnecessary.